

CLAIMS

What is claimed:

1. A process of hydrogenating a dinitrile, said process  
5 comprising: contacting the dinitrile with hydrogen in the present of a catalyst and a modifier at a pressure of at least about 15.27 MPa (2200 psig) , wherein said catalyst comprises an element selected from the group consisting of Fe, Ru, Co, and Ni and said modifier is at least one member selected from the group consisting of quaternary ammonium  
10 hydroxides, quaternary ammonium cyanides, quaternary ammonium fluorides, quaternary ammonium thiocyanides, quaternary phosphonium hydroxides, carbon monoxide, and hydrogen cyanide.
2. The process of claim 1 wherein the temperature is in the range of about 50°C to 250°C.
- 15 3. The process of claim 1 wherein the pressure is in the range of about 20.7 to 34.5 MPa (3000 to 5000 psig).
4. The process of claim 1 wherein the catalyst comprises iron.
5. The process of claim 1 wherein the modifier comprises a  
quaternary ammonium cyanide or quaternary ammonium hydroxide salt.
- 20 6. The process of claim 1 wherein the dinitrile is adiponitrile.